

captivity ; and I have great hopes that, under the care of the captain and officers of the good ship which bears them, they will reach the Society's Gardens all safe*.

White Storks are not mentioned in the ' Fauna Japonica ;' but I am told that they are frequently seen in large flocks in Japan. Of their occurrence in this continent the evidence is very slight ; at all events no specimen seems ever to have been procured. I have never myself seen such a bird in China. Père David states (but not very positively) that he saw one once at Takoo on the Peiho river. Neither Middendorf nor Radde mentions the bird in their works ; and v. Schrenck gives its occurrence in the Amoor country on the evidence of a native, whose description tallies so completely with that of the European species, that it was doubtless obtained by leading questions. This new Stork must therefore be regarded for the present as a peculiar production of Japan, probably wandering at times across to the Chinese continent.

Shanghai, March 14, 1873.

5. On certain Species of *Aquila*.

By H. E. DRESSER, F.Z.S. &c.

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Some time ago my friend Mr. W. E. Brooks wrote to Mr. Gurney and myself to say that he had received from Captain Elwes an eagle obtained on the Bosphorus which certainly was *Aq. bifasciata*, Gr. I freely confess that I could not at the time reconcile myself to acquiesce in Mr. Brooks's identification, and wrote to him to say so. However, soon afterwards Captain Elwes sent to me the companion bird to that sent to Mr. Brooks, which rather astonished me, as it certainly approaches very closely to, if it be not identical with, *Aq. bifasciata* from India. I have also lately received from Sarepta a young Eagle labelled *Aquila clanga*, which still more closely resembles the young of *Aq. bifasciata* ; and I have had a drawing made of it which I now have the pleasure of exhibiting, and purpose sending it out to Mr. Brooks by next mail. I have also most carefully examined the series of Spotted Eagles I possess, and more especially the immature birds supposed to be the young of *Aq. orientalis*, Cab., and have found that they differ in having the nostrils almost circular, whereas *Aq. orientalis* has them elongated. This has led me to the belief that we have in Eastern and South-eastern Europe the large Spotted Eagle hitherto supposed to occur only in Asia, the *Aq. vittata* of Indian ornithologists ; and in order to exhibit my reasons for assuming this to be the case, I have brought with me several specimens of the large Spotted Eagle from Albania, and also an adult Spotted Eagle from India. I am now endeavouring to collect a large series of specimens in all stages of plumage, in order to follow up and work out this question satisfactorily, and hope ere long to place before this Society the

* This, I regret to say, was not the case. The birds both died on the way home ; and not even their skins were preserved.—P. L. S.

result of my investigations. The next question that arises is as to whether *Aquila orientalis* and *Aquila bifasciata* are identical; and on this subject I beg to offer the following remarks.

Taking the four specimens of *Aquila bifasciata* sent by Mr. Brooks to illustrate the various plumages of that Eagle, my specimens of *Aquila orientalis* exhibit a very close affinity to that bird. My young example from Sarepta compared with No. 1, or the youngest bird in Mr. Brooks's series, agrees precisely in coloration, except that the *Aq. orientalis* is rather darker; and on close examination I find that Mr. Brooks's specimen has the plumage somewhat worn, whereas in mine the feathers appear to be quite freshly moulted, which will easily account for the difference in colour. No. 2 in Mr. Brooks's series has the underparts coloured as in the young *Aq. orientalis* above referred to, but has lost the bars on the wing and the yellowish tip to the tail, the upper tail-coverts being white at the tip, marbled with brown instead of yellowish buff as in the very young bird; some of the inner secondaries are much worn on the edge, and it appears almost as if the yellowish-buff border had been worn off; on the nape are a few of the dirty yellow feathers of the fully adult plumage. No. 3 in Mr. Brooks's series appears to me younger than No. 2, and should come in the second place; for it has still remains of the first stage of plumage on the tail-coverts and secondaries; otherwise it differs little from No. 2.

The adult specimens of *Aquila orientalis* which are usually sent with the eggs from the Volga correspond in plumage with Nos. 2 and 3 in Mr. Brooks's series, but have the head and nape of a pale uniform brown colour, and not as in the adult *Aq. bifasciata*, which is dark brown on the head and rufous yellow on the nape; moreover the adult bird from the Volga has the upper tail-coverts nearly uniform brown, a few feathers only being dull white, marbled with brown at the base. I am, however, indebted to my friend Captain Elwes for the loan of a specimen from the Bosphorus, which in plumage agrees very closely with No. 4, or the fully adult bird in Mr. Brooks's series, which he also sends as agreeing with No. 934 of Mr. Hodgson's illustrations. Like this bird, the Bosphorus specimen has the crown dark brown and the nape rusty yellow; but it differs from it in having the upper tail-coverts uniform dark brown, whereas in the adult *Aquila bifasciata* they are yellowish white barred and tipped with dark brown, reminding one somewhat of the inner secondaries of the Short-eared Owl, except that the bars are wider apart in this eagle's tail-coverts.

This specimen from the Bosphorus, I should think, is the adult (or rather a very old specimen) of *Aquila orientalis*; for it is the only one that I have ever seen that has assumed this stage of plumage. Before, however, the question can be set at rest, it will be necessary to collect together a large number of specimens in all stages of plumage. This I am now trying to do, and hope that I shall in the course of time be able to lay before this Society the result of my investigations. How soon this will be it is impossible to say; for time must be put out of the question by any one who takes up *Raptores* to work at.

The following are the comparative measurements of the four European and four Indian Eagles of this group that I have examined:—

	Culmen.	Height of bill at base.	Wing.	Tail.	Tarsus.	Middle toe without claw.
<i>Aq. bifasciata</i> , No. 1. Loyah, Feb. 26, ♀ ..	2.60	1.2	23.0	12.75	4.40	2.2
" " 2. " Jan. 26, ♂ ..	2.65	1.1	23.0	12.0	3.73	1.95
" " 3. " Feb. 16, ♀ ..	2.65	1.1	25.0	13.5	3.70	2.4
" " 4. Nubbegunge, Dec. 4, ♂ ..	2.75	1.2	22.5	11.9	3.60	1.9
<i>Aq. orientalis</i> . Bosphorus, March 4, ♂ ..	2.40	1.1	20.75	10.7	3.75	2.1
" Volga, May, ♂	2.40	1.0	21.2	10.7	3.7	2.1
" Sarepta, May, ♀	2.70	1.1	23.0	11.75	3.8	2.3
" " July, juv. ♂	2.45	1.05	20.0	10.75	3.7	2.3

The next question that arises is as to what Pallas's *Aquila clanga* really is. His description is so vague that it is almost impossible to make it agree with either the Spotted Eagle of Northern Europe, that of Southern Europe, or the bird referred to above under the name of *Aquila orientalis*. I think it most probable that Naumann was correct in considering that Pallas referred to the large race of Spotted Eagle which is met with in South-eastern Europe, and which, though larger in size, in immature plumage closely resembles the young of the Spotted Eagle of Northern Germany, having also a *round* nostril, which *Aq. orientalis* has not. Since I wrote the last paper on Eagles which I exhibited before this Society in December last, I have, as before stated, ascertained that the young of *Aq. orientalis* is *not* spotted, and have found reason to surmise that the Spotted Eagle found in South-eastern Europe is the same species as that met with in India. I have referred to the Indian spotless Eagle under the name of *Aquila bifasciata*, Gray and Hardw., to the Indian Spotted Eagle as *Aq. vittata*, Hodgs., and to the Volga bird, which is so closely allied to *Aq. bifasciata*, as *Aquila orientalis*, Cab.; but I am not at all sure that these names will all stand, nor can I say any thing decided on this point until I have carefully worked out the synonymy of the whole of the Spotted Eagles. Cabanis, in proposing the name of *Aq. orientalis* for the Volga bird (Cab. Journ. 1854, p. 369, footnote), expressly states that the specimens he has examined are three birds obtained from Sarepta through Mr. Moschler, which are now in the Berlin Museum; but he does not appear to have put his finger on the chief characteristics, as he speaks of it as being similar in character to *Aquila navia*, but as being a much larger and more powerful bird: "sie haben also die Kennzeichen der *A. navia*, weichen aber von dieser durch auffallende Grösse und Stärke sehr ab" is what Dr. Cabanis says on the subject; and did he not expressly refer to Sarepta specimens, I should be inclined to believe that he had before him examples of *Aquila vittata*; but, like almost all our European ornithologists, Dr. Cabanis has mixed up these Eagles together, and it is

